

BIBLIOGRAPHICAL NOTICES.

XVI. *Application of the Physiological Doctrine to Surgery.* By L. J. BEGIN, M. D. Ex-surgeon Aid-major to the Military Hospital of Instruction of Metz, &c. &c. Translated from the French. By WILLIAM SIMS REYNOLDS, M. D. Charles-ton, 1835. pp. 227. 8vo.

We are gratified to see a work of this kind in our own language. It is sufficient to observe the many errors daily committed in the practice of surgery, to be convinced how deficient many of the profession are, in a knowledge of the recent improvements and most approved principles of this important branch of the healing art. Most of the elementary works on surgery to be found in the hands of students, contain errors that have been completely refuted, and advocate principles not in accordance with the views of some of the ablest pathologists of the present day. The author of the work before us has pointed out some of these errors, and has given an able exposition of what we conceive to be the correct principles of surgery. The works of M. Broussais, and those of the physicians of the physiological school, have given to the science a new aspect, and have added so much to its improvement, that we cannot regard him as an enlightened surgeon, who has not derived some benefit from their labours.

The work is divided into a preliminary discourse and nine chapters. The author, in his preliminary discourse, notices the connexion of medicine with surgery, and the difference between the surgeon and mere operator. The first five chapters are devoted to the consideration of acute lesions; the remaining four to chronic affections. The acute lesions are examined less in relation to their etiology, and the mechanical operations which they require, than with respect to the local and general affections of which they are the source, the influence which they exert upon the principal viscera, and the medicinal remedies, internal and external, by which they may be removed. With regard to chronic affections, an endeavour has been made to trace them back as far as the vital lesion which excites and maintains the most important affections of this kind, in order to establish the curative indications which they present, and the most proper plan of treating them. No considerations are presented on surgical diseases that may be said to arise from the debility of certain tissues. M. Begin does not deny the existence of this class of lesions, but he does not consider them quite as numerous as some persons think; and as surgeons and physicians have made such an abuse of stimulants, he thinks it less necessary to show where they are useful, than to point out the more numerous cases where they are injurious.

After appropriate remarks on the different methods employed in the local treatment of acute surgical diseases, the author observes—

"The most judicious surgeons have for a long time sanctioned the propriety
No. XXXII.—August, 1835. 38

of that common custom which consists in covering the wounded parts with a solution of the muriate of soda, wine, or camphorated spirits, and some other topical irritants which they lavish in great abundance in cases even of wounds of fire-arms. Experience has proved, that these liquids, far from preventing or moderating the swelling and inflammation, are only proper to hasten the moment of their appearance, and to render them more considerable by augmenting the excitation of the parts. Pure water has seemed, with reason, to be the topical remedy the most simple and the most salutary which we can employ in a great number of cases. Applied cold, and for a space of time sufficiently long, it eases promptly the pain; opposes the effects of the stimulation produced by the wound; and the afflux of the fluids. Employed lukewarm, when the inflammation is developed, it possesses in a high degree an emollient property: it calms and relaxes the tissues, it moderates the organic movements, and favours very much the termination of the inflammation by resolution." p. 41.

The latter part of this chapter is occupied with the consideration of the use of antiphlogistics after surgical operations, and in the treatment of acute inflammations generally. In conclusion the author remarks very properly—

"The adage which has had in the practice of surgery as well as in medicine, the most pernicious consequences, is thought to be the following: 'When,' says a modern writer more remarkable for the brilliance of his style than for the profoundness and justness of his opinions; 'when prostration of strength complicates an inflammation, whatever be its seat, do not fear to augment it by the use of tonics.'* It is at this day, perfectly demonstrated, that this prostration depends, almost always, on the excess of local inflammation, or the sympathetic inflammation of the stomach and intestines, and that the above axiom, independently of that which is absurd in theory, would be very dangerous if it were strictly followed in practice." p. 62.

The third chapter treats of the sympathetic phenomena determined by acute surgical lesions. The physiological and pathological details therein contained, are of the highest importance in medico-chirurgical theory and practice. They serve to elucidate a number of morbid phenomena, and show the proper basis upon which to ground the treatment of many internal affections which often complicate wounds.

The treatment of internal irritations which complicate surgical affections, is next judiciously considered. The curative indications are 1st. "To diminish the violence of local inflammation."—2d. "To combat the previous irritations of the viscera."—3d. "To remove from the wounded, all those causes capable of provoking in them, internal inflammations."—4th. "To combat the internal affections which complicate external injuries, when we have not been able to prevent their development." These indications are treated of separately.

The fifth chapter considers the nervous affections produced by acute surgical lesions. Among these are *tetanus*. M. Begin considers tetanus to depend upon an irritation of the brain, the spinal marrow, and the rachidian prolongation; or rather, that the tetanic rigidity is nothing more than an effect of this irritation, which is itself determined by the stimulation of some other part of the body. This original stimulation he thinks resides very often in the injured part itself; this he infers from the tetanic rigidity very often manifesting itself after wounds by tearing, and the injury of very nervous and sensible parts. But these are not alone the causes which he thinks may produce tetanus: vicis-

* *Nosegraphic Chirurgicale*, tom. I. page 204, fifth edition.

situdes of heat and cold; the sudden suppression of the cutaneous transpiration; a gastrite more or less intense, are some of the circumstances which he thinks most frequently determine tetanus even in those who are wounded. It is owing he thinks to the greater susceptibility to impressions,—the stimulation of their nervous system,—the activity of the sympathies,—and the disturbance in their organic actions, that the wounded are more liable to tetanus than others. He goes on further to remark—

"Surgeons have committed a serious error in wishing always to find in the wounds themselves the causes of tetanus. A man, for example, is wounded on the finger; the wound continuing to the tenth day, is a lively red, and covered by a healthy suppuration; there exists in the part, neither sloughing, tumefaction, nor pain. In the meantime, the patient, after having taken exercise, lies down, fatigued, on his bed near an open window; he becomes chilly very soon; shiverings come on, and some hours after, tetanus is developed. They then lavish opium; they explore the wound in order to be certain that there is not any foreign body concealed in it; finally, they cut off the wounded part, and the patient dies. I demand, was it not absurd to search in the wound for the cause of tetanic affection? Did not this depend on the impression made by the cold on the integuments, and was it not developed after the same mechanism as the tetanus which destroys under similar circumstances, children, and above all young negroes between the tropics? How often have errors of this kind been committed, and how often have they not accused the wounds of provoking the tetanus which was manifestly determined by gastro-intestinal irritations! On some occasions it has appeared to me that cold falling upon the surfaces of solutions of continuity in a state of suppuration, could determine the affection of which we are speaking, by provoking a true metastasis of irritation to the central parts of the nervous system. Then the wound becomes dried up, pale, wan, and sometimes insensible, at the same time that the tetanic rigidity is developed and makes its progress." p. 103.

To combat tetanus, the author proposes that we should remove its true causes. Thus we may employ sometimes incisions for the purpose of separating nerves incompletely divided,—sometimes narcotics, vermiculites, sudorifics, epigastric bleedings, baths, stimulating frictions, &c. To this treatment, variable according to the causes of the disease, the author recommends the application of leeches to the temples, the back of the neck, and along the spine. We have in two instances observed striking benefits from general bleeding and leeches to the spinal column.

In the sixth chapter, M. Begin has discussed at some length, the pathology of scrofula and cancer; and appropriate notes on these subjects are added by the translator. We shall pass over these observations, merely with the remark, that they contain many valuable reflections. The seventh chapter, which treats of the local treatment of chronic surgical diseases, contains several interesting cases illustrative of the utility of antiphlogistics in cancer, and which show clearly what astonishing advantages can be derived from their judicious employment in this formidable disease.

The consideration of the sympathetic phenomena produced by external chronic irritations, occupies the eighth chapter. These considerations are of the highest importance to the surgeon. They serve to throw much light on the causes and seat of internal affections which almost always manifest themselves in important surgical diseases of long standing; and likewise point out the most

proper plan of treatment to be adopted for the purpose of removing them. Passing over some important remarks, we shall make the following extract:—

"There is a phenomenon unfortunately too common in large hospitals, and which merits here, a special consideration. It often happens after great operations, and particularly after amputation performed in cases of white swelling, caries, or other chronic diseases of the members, that the patients, whose general state of health appeared very good, die in several days or weeks. This fatal issue is announced by the continuation of the thinness, feebleness, and inappetence which precedes the operation. The traumatic fever, the development of which generally follows this, is continued in a moderate degree, without its being possible to know the cause. On opening the dead body, one of the internal parts, such as the pleura, the parenchyma of the lungs, the liver, the peritoneum, or the spleen, but most commonly the pleura, is found filled with pus, and in a more or less advanced state of disorganization. The most attentive examination of the subject, often will not lead to a knowledge of the lesion that should produce death. A dry cough is quite common, a feeling of heaviness in one side of the chest, and a dull sound which this side gives to percussion, announce in a manner sufficiently positive, the suppuration of the pleura; but these signs do not become evident until the membrane is already filled with a large quantity of liquid and no further attempts can serve the patient. It is the same with the pain in the hypochondria or in the whole of the abdominal cavity, which accompanies the suppuration of the liver, the spleen, or the peritoneum. Lesions of this kind are very serious and almost constantly fatal.

"The profound study of the laws of the living organization, alone permits us to unveil the mechanism by which affections of this kind are produced. If it is considered, that these internal suppurations do not manifest themselves until after chronic diseases which have for a long time caused the patient to suffer, and fatigued the economy, it will appear reasonable that they are the result of stimulation sympathetically exercised by the irritated external organs, on the parts which are their seat. The super-excitation which is produced under these circumstances, often establishes itself with slowness, without producing a considerable disturbance in the functions of the affected organs, and without provoking an acute and violent febrile agitation. Then practitioners may mistake the too fugitive signs of internal lesion, and the opening of the body will show him disorders, the existence of which he had not foreseen. This may happen with subjects who die of external chronic inflammations without ever having been aided by art. But let a person operate; let the diseased part be re-trenched—at a time when some internal organ begins to be irritated; then this irritation, far from ceasing, continues its march, making new progress; the acute inflammation and traumatic fever which follow the operation, instead of contributing to extinguish, gives to it new energy, by the sympathetic stimulation and circulatory movement which they determine. Perhaps, at this time, the sudden withdrawal of a focus of suppuration already of long standing, still disposes the economy to a similar secretion elsewhere. However it may be, we cannot consider the internal abscesses of which we now speak, as independent of the external lesions to which they succeed: at the period of the operation, they either existed already, but were of too little magnitude to be discovered, or the organs which they invaded were not yet but sympathetically irritated, but with such force, that this irritation might not have ceased by the ablation of the part which had provoked it, and that, to the contrary, had made new progress after the operation." p. 197.

Lastly, the author considers the treatment of internal irritations which complicate chronic surgical diseases; and notices the errors of surgeons in relation to this subject. He observes—

"Surgeons, in treating patients affected with chronic diseases in whom the viscera begin sympathetically to inflame, still combat the hectic fever with bark and its preparations; want of appetite, with bitters; diarrhoea, with astringents and opium; feebleness, with tonics in every form; and internal accidental phlegmasiae, which come on during this state of debility, with vesicatorys, and, almost always, exciting drinks. To restore lost strength, give tone to the stomach, contract the mucous follicles of the large intestines, combat the adynamic phlegmasia, by removing local debility of the vessels, such are the general indications which they propose to fulfil. It seems as if the whole of Brownism had taken refuge in this portion of the healing art. But, what are the most ordinary results of this practice? Exasperation of the symptoms, and the rapid death of the patients." p. 205.

He further observes—

"Always when a surgical lesion tends to become chronic, it is necessary to examine the nature of this lesion, its seat, the manner in which it progresses, and the effects that may be expected from the internal and external treatment which is proposed to be employed. The temperament, the age, the strength and actual state of the constitution of the patient, are of great importance in determining what course to pursue. If it is thought that the patient is sufficiently strong to resist the violence and prolongation of the irritation;—if, besides, the local lesion is of such a nature as to be able to subside spontaneously, or by well-directed efforts of art;—we should most assuredly temporize and put in use such therapeutic means as may be most suitable. But when the result of the calculation of the practitioner is exposed to this proceeding, and the patient is threatened with immediate danger, or the local disease seems to be of an incurable nature otherwise than by operating, it is necessary without further delay, to have recourse to the latter." p. 206.

After having considered the time most proper for operating, and noticed the opinions of some with regard to this subject, the author next inquires:—after the use of instruments is decided upon, what preparation ought the patient to undergo, finally to insure the success of the operation? We will here insert his remarks:—

"Enlightened practitioners have for a long time since, sanctioned the empirical and ridiculous method of bleeding, purging, and bathing all patients, previous to performing the amputation of a limb, the extraction of a vesical calculus, the incision of a fistula in ano, etc. The surgeon enlightened by pathological physiology, confines himself to examining with attention, the state of all the organs and the manner in which all the functions are executed. Having acquired by this investigation, an exact knowledge of the different parts of the patient on whom he is to operate, he determines easily what should be done in order to prevent the accidents which may succeed the operation."

"If the patient is otherwise healthy, the only reasonable preparation consists in employing means the most proper either to diminish the sensibility, or to moderate the circulatory movement if it is violent and appears disposed to become more so, or finally, in producing a state of relaxation in the gastric passages, capable of preventing the too rapid and too intense development of gastritis. Baths, bleeding, some emollient lavements, diluent drinks, and a soothing regimen, are sufficient to fulfil these indications, to which, no doubt, it is not necessary to attach very great importance, but it will be dangerous to neglect them entirely. I know many surgeons of very great expertise in the execution of operations, and who are, notwithstanding, less successful than others, because they do not pay sufficient attention to methodically preparing their patients before the operation, and because they do not prevent and combat with sufficient attention and energy the inflammatory affections which succeed operations."

"If the person on whom we are to operate is in a feeble state of health, accompanied with notable disturbances in the most important functions, the preparation which we ought to put in use ought to have for its object the combating of the irritations of the internal organs. Thus, for example, if the patient who is to undergo an amputation has the skin dry and burning, the stomach painful, the point and borders of the tongue red, intense thirst, frequent and hard pulse; beware of operating under such circumstances. Abstain, above all, from having recourse to aliments for the purpose of increasing the forces; to sudorifics for establishing the cutaneous transpiration; to purgatives, with the intention of disengaging the intestinal canal of supposed bilious or mucous subarachnoid materials; finally, to bark, intended to prevent the return of the febrile action. Such a treatment, which some practitioners still adopt in the cases of which we speak, would be eminently dangerous: it would have for its almost inevitable effect, the exasperations of the symptoms; and even when it does not produce all the evil of which it is susceptible, whilst precious time is lost by administering in vain, the favourable period for the operation passes. It is proper then at this time, to have recourse to general baths, soothing drinks, epigastric bleedings, and to a regimen composed of a small quantity of aliments that are light and easy of digestion. These means do not enfeeble the patients; far from it: the gastric phlogosis being diminished, the secretions are re-established; nutrition recovers a part of its activity; and the return of a colour in the skin and some firmness in the muscles, announce that the economy is in a state for supporting the operation."

"Analogous means ought also to be employed, if other organs than the digestive canal become the seat of a sympathetic irritation determined by the external disease. The pectoral organs, the liver, the spleen, and the whole of the abdominal cavity should then be examined with great attention. If the patient cannot take a full inspiration without experiencing pain; if he is troubled with a cough more or less frequent; if percussion of the thorax does not give, above all, a clear sound; if the stethoscope announces the existence of some lesion in the organs of respiration and circulation, expect to see an external inflammation arise, and thus rob you as well as the patient, of the fruit of the best executed operation. It is, therefore, of the highest importance to combat at this time, with energy, the already developed or only imminent irritations of the organs, by means of local bleedings, baths, soothing drinks, a strict regimen, and revulsives—such as vesicatories, setons, moxas, cauteries, &c. The same attention ought to be paid to the exploration of the abdominal viscera, and the same perseverance in destroying the very last vestiges of their phlegmasiae. It is only after being assured of the proper state of all the viscera, that we are permitted to operate, and that we can do it with some security. It is here that medical knowledge extended and founded on a wholesome physiology, procures for surgeons who possess it, signal success; whilst under the same circumstances, operators limited to manual action, meet, in spite of their dexterity, only with inevitable reverses." p. 215.

We cannot attach too much importance to the period of operating in chronic surgical diseases; and there can be no question but that a great many operations have been unsuccessful, because they have been performed at a period when the irritations which required them have had their greatest intensity. At this time the organs are sympathetically excited by the local lesion; and as they have become habituated to this focus of irritation, when it is taken away, the most trivial cause will produce a similar irritation of some other organ. The parts secondarily invaded, will likewise be more quickly destroyed, as they have been already for a long time predisposed to the phlegmasia which attacks them. It is for these reasons, that cancerous diseases so often relapse. It becomes proper then, according to our author's views, to make use of an an-

tiphlogistic treatment before operating. Leeches to the tumour or ulcer, emollient cataplasms, baths, &c. should be used. In the cases of cancer, when we have succeeded in removing the lancinating pains, established the nutritive functions, and lessened the sympathetic phenomena produced by the cancer, we may operate with safety; and the chances of a return of the disease will be very much diminished.

In conclusion, we recommend the work to the profession generally: it should be read by every student who wishes to have a knowledge of his profession, grounded upon correct views of pathology and pathological physiology.

J. D. H.

XVII. *The Philosophy of Health; or an Exposition of the Physical and Mental Constitution of Man, with a View to the Promotion of Human Longevity and Happiness.* By SOUTHWOOD SMITH, Physician to the London Fever Hospital, to the Eastern Dispensary, and to the Jews' Hospital. Vol. I. pp. 408. 12mo. London, 1835.

The objects of this work are far more comprehensive than the title would lead us to suspect. It is, as Dr. Smith himself observes, "to give a brief and plain account of the structure and functions of the body, chiefly with reference to health and disease;" and this "is intended to be introductory to an account of the constitution of the mind, chiefly with reference to the development and direction of its powers." Such a definition would embrace every branch of medical science, and it is impossible to say to what extent the work might be expanded.

The present volume is occupied with but two of those branches,—anatomy and physiology. It is a treatise on these subjects adapted to the general reader—intended, indeed, exclusively for his use—and illustrated by upwards of one hundred wood engravings.

Dr. Smith's style is well suited to his subject. It is plain, terse, and withal accurate. In such a production we look not for novelty.

His remarks on the immortal discoverer of the circulation of the blood are extremely apposite, and of common application.

"Before the time of Harvey, a vague and indistinct conception, that the blood was not without motion in the body had been formed by several anatomists. It is analogous to the ordinary mode in which the human mind arrives at discovery, that men's minds should have an imperfect conception of an unknown truth, before some one mind sees it in its completeness and fully discloses it. Having, about the year 1720, succeeded in completely tracing the circle in which the blood moves, and having at that time collected all the evidence of the fact, with a rare degree of philosophical forbearance, Harvey still spent no less than eight years in re-examining the subject, and in maturing the proof of every point, before he ventured to speak of it in public. The brief tract, which at length he published, was written with extreme simplicity, clearness and perspicuity, and has been justly characterized as one of the most admirable examples of a series of arguments deduced from observation and experiment that ever appeared on any subject.

280. "Cotemporaries are seldom grateful to discoverers. More than one instance is on record in which a man has injured his fortune and lost his happiness through the elucidation and establishment of a truth which has given him immortality. It may be that there are physical truths yet to be brought to